

ABSTRACT OF THE DISCLOSURE

An object is to provide a reactor for hydrotreating which exhibits a total desulfurizing activity higher than that of the reactor according to the prior art, and which is reduced in the rate of lowering of the desulfurizing activity and therefore can keep the high desulfurizing activity over a long period, and to provide a process by the use of the reactor. A reactor for hydrotreating, which comprises at least four catalyst layers packed respectively with hydrotreating catalysts satisfying the relationship represented by the following formulae: $S_n \leq S_{n+1}$, $1.15V_n \geq V_{n+1}$ wherein S represents the surface area per cubic meter of each hydrotreating catalyst; V represents the pore volume per cubic meter of catalyst; and wherein n is a natural number representing the order of each catalyst layer.